

**What Is Claimed Is:**

1. A fluid application system for vehicle comprising:

a fluid source;

5 source;

a spray unit including a nozzle in fluid connection with said pump;

a sensor adapted to output a vehicle detection signal; and

10 a controller in operative communication with  
said sensor and said pump, said controller adapted to  
receive said vehicle detection signal, delay a first  
time period, and activate said pump for a second time  
period to deliver said fluid source by way of said  
spray unit to a detected vehicle as a function of said  
vehicle detection signal.

2. A fluid application system according to  
claim 1 wherein said fluid source comprises first and  
second fluid sources in fluid communication with said  
pump, said pump adapted to receive said first and  
second fluid sources and communicate a mixture of said  
first and second fluid sources to said spray unit.

3. A fluid application system according to  
claim 1 wherein said nozzle is a rotary nozzle and said  
25 pump is a piston-type pump.

4. A fluid application system according to claim 1 wherein said spray unit comprises a boom supporting a plurality of nozzles at a first end, said

boom configured to support said nozzles over a detected vehicle.

5. A fluid application system according to  
claim 4 wherein said sensor is located at said first  
5 end of said boom.

6. A fluid application system according to  
claim 1 wherein said sensor is a light-based sensor.

7. A fluid application system according to  
claim 5 wherein said sensor is a light-based sensor.

10 8. A fluid application system according to  
claim 5 wherein said sensor is an ultrasonic sensor  
directed underneath said first end of said boom and  
said controller activates said pump as a function of a  
vehicle profile signal received from said ultrasonic  
15 sensor.

9. A fluid application system according to  
claim 2 comprising a selectable valve between said  
first fluid source and said pump, said valve responsive  
to a valve control signal for modifying a flow rate of  
20 said first fluid source to said pump.

10. A fluid application system according to  
claim 9 wherein said valve is operable at two different  
flow rates and said controller is adapted to output  
said valve control signal to said valve in response to  
25 said vehicle detection signal.

11. A fluid application system according to  
claim 1 comprising a second sensor for communicating a  
type of vehicle signal, and said controller is adapted

to activate said pump as a function of said detected vehicle signal and said type of vehicle signal.

12. A fluid application system according to claim 11 wherein said sensor is a light-based sensor 5 and said second sensor is an ultrasonic sensor.

13. A fluid application system for vehicle comprising:

10 a first fluid source;  
a second fluid source;  
a pump in fluid communication with said first and second fluid sources for delivering a mixture of said first and second fluids;

15 a spray unit comprising a boom supporting a nozzle at a first end, said boom configured to support said nozzle over a detected vehicle, said nozzles in fluid communication with said pump;

a sensor adapted to output a vehicle detection signal; and

20 a controller in operative communication with said sensor and said pump, said controller adapted to receive said vehicle detection signal, delay a first time period, and activate said pump for a second time period to deliver said fluid source by way of said nozzle to a detected vehicle as a function of said 25 vehicle detection signal.

14. A fluid application system according to claim 13 comprising a selectable valve between said first fluid source and said pump, said valve responsive to a valve control signal for modifying a flow rate of 30 said first fluid source to said pump.

15. A fluid application system according to  
claim 14 wherein said valve is operable at first and  
second flow rates and said controller is adapted to  
output said valve control signal to said valve in  
5 response to said vehicle detection signal such that  
first and second ratios of first and second fluid  
mixtures is delivered to said nozzles.

16. A fluid application system according to  
claim 15 wherein said vehicle detection signal includes  
10 a type of vehicle indicator.

17. A fluid application system according to  
claim 15 wherein said boom includes first and second  
fluid conduits between said pump and said nozzle, said  
first fluid conduit for communicating said first ratio  
15 of fluid mixture and said second conduit for  
communicating said second ratio of fluid mixture.

18. A fluid application system according to  
claim 13 wherein said first time period is between  
approximately 3 and 10 seconds.

20 19. A fluid application system according to  
claim 18 wherein said second time period is between  
approximately 15 and 90 seconds.

20. A fluid application system according to  
claim 13 comprising three nozzles.

25 21. A fluid application system according to  
claim 20 wherein each of said nozzles are rotating  
nozzles.

22. A fluid application system according to  
claim 13 wherein said first and second fluid sources  
each include a reservoir.

23. A fluid application system according to  
5 claim 13 comprising a second sensor for communicating a  
type of vehicle signal, and said controller is adapted  
to activate said pump as a function of said detected  
vehicle signal and said type of vehicle signal.

24. A fluid application system according to  
10 claim 23 wherein said sensor is a light-based sensor  
and said second sensor is an ultrasonic sensor.

25. A fluid application system according to  
claim 13 wherein said first fluid source, pump, and  
controller are mounted on a portable structure and said  
15 spray unit boom, at a second end, is connected to said  
portable structure.

26. In a fluid application system including  
a controller, pump and spray unit, a method of applying  
a fluid mixture to a vehicle comprising:

20 receiving a vehicle detection signal from a  
first sensor indicating the presence of a vehicle under  
said spray unit;

delaying a first time period;

activating said pump for a second time period  
25 to deliver a mixture of first and second fluids from  
respective first and second fluid sources to said spray  
unit as a function of said vehicle detection signal.

27. A method according to claim 26 further comprising delaying a third time period before receiving another vehicle detection signal.

5 28. A method according to claim 26 wherein said second time period is a function of a profile of said detected vehicle signal.

10 29. A method according to claim 26 wherein said first time period is between approximately 3 and 10 seconds and said second time period is between approximately 15 and 90 seconds.

15 30. A method according to claim 26 further comprising setting a valve, in-line with said first fluid source and upstream of said pump, to a selectable position to provide a predetermined fluid mixture ratio to said spray unit.

20 31. A method according to claim 26 further comprising receiving a vehicle profile signal from a second sensor and wherein activating said pump includes activating said pump as a function of said vehicle detection signal and said vehicle profile signal.

25 32. A method according to claim 31 wherein activating includes, when said vehicle detection signal indicates the presence of a vehicle under said spray unit and said vehicle profile signal indicates an object between approximately 4 and 5.5 feet above a ground level, turning on said pump.

33. A fluid application system for vehicle comprising:

1                   a fluid source;  
2                   a control valve in fluid communication with  
3                   said fluid source;

4                   a spray unit comprising a boom supporting at  
5                   least one rotary nozzle at a first end, said boom  
6                   configured to support said nozzle over a detected  
7                   vehicle, said nozzles in fluid communication with said  
8                   control valve;

9                   a sensor adapted to output a vehicle  
10                  detection signal; and

11                  a controller in operative communication with  
12                  said sensor and said control valve, said controller  
13                  adapted to receive said vehicle detection signal, and  
14                  activate said control valve to deliver said fluid  
15                  source by way of said rotary nozzle to a detected  
16                  vehicle.

17                  34. A fluid application system according to  
18                  claim 33 wherein said fluid source comprises a first  
19                  and second fluid sources in fluid communication with  
20                  said control valve, said control valve responsive to a  
21                  control signal for communicating a mixture of said  
22                  first and second fluid sources to said spray unit.

23                  35. A fluid application system according to  
24                  claim 34 comprising a selectable valve between said  
25                  first fluid source and said control valve, said  
26                  selectable valve responsive to a valve signal for  
27                  modifying a flow rate of said first fluid source to  
28                  said control valve.

29                  36. A fluid application system according to  
30                  claim 35 wherein said selectable valve is operable at

first and second flow rates and said controller is adapted to output said valve signal in response to said vehicle detection signal such that first and second ratios of first and second fluid mixtures is delivered 5 to said nozzles.

37. A fluid application system according to claim 36 wherein said boom includes first and second fluid conduits between said control valve and said nozzle, said first fluid conduit for communicating said 10 first ratio of fluid mixture and said second conduit for communicating said second ratio of fluid mixture.

38. A fluid application system according to claim 33 comprising three rotary nozzles.

39. A fluid application system according to 15 claim 33 wherein said at least one rotary nozzle is an oscillating nozzle.

40. A fluid application system according to claim 33 wherein said fluid source, control valve and controller are mounted on a portable structure and said 20 spray unit boom, at a second end, is connected to said portable structure.